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PATENT COOPERATION TREATY

PCT/EP99/09571

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE

(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

SIKKEN, Antonius, H., J., M.
Unilever N.V.
Patent Department
Olivier van Noortlaan 120
NL-3133 AT Vlaardingen
PAYS-BAS

Date of mailing (day/month/year) 23 February 2000 (23.02.00)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference F 7480 (V)	
International application No. PCT/EP99/09571	
International filing date (day/month/year) 06 December 1999 (06.12.99)	

1. The following indications appeared on record concerning:
☒ the applicant ☒ the inventor ☐ the agent ☐ the common representative

Name and Address

State of Nationality

State of Residence

Telephone No.

Facsimile No.

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:
☐ the person ☐ the name ☐ the address ☐ the nationality ☐ the residence

Name and Address

OVERBEEKE, Nico
Unilever Research Vlaardingen
Olivier van Noortlaan 120
NL-3133 AT Vlaardingen
Netherlands

State of Nationality
NL

State of Residence
NL

Telephone No.

Facsimile No.

Teleprinter No.

3. Further observations, if necessary:
Additional applicant/inventor for US only.

4. A copy of this notification has been sent to:

☒ the receiving Office
☒ the International Searching Authority
☐ the International Preliminary Examining Authority

☒ the designated Offices concerned
☐ the elected Offices concerned
☐ other:

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

J. Leitao

Facsimile No.: (41-22) 740.14.35

Telephone No.: (41-22) 338.83.38

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PATENT COOPERATION TREATY

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NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C.20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing: 06 July 2000 (06.07.00)	
International application No.: PCT/EP99/09571	Applicant's or agent's file reference: F 7480 (V)
International filing date: 06 December 1999 (06.12.99)	Priority date: 23 December 1998 (23.12.98)
Applicant: VAN BUUREN, Jan et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International preliminary Examining Authority on:

13 April 2000 (13.04.00)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer: J. Zahra Telephone No.: (41-22) 338.83.38
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PATENT COOPERATION TREATY

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REC'D 11 APR 2001

INTERNATIONAL PRELIMINARY EXAMINATION REPORT PCT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference F 7480 (V)	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP99/09571	International filing date (day/month/year) 06/12/1999	Priority date (day/month/year) 23/12/1998
International Patent Classification (IPC) or national classification and IPC A23L1/30		
Applicant UNILEVER N.V. et al		


1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 7 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☒ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 13/04/2000	Date of completion of this report 09.04.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Smeets, D Telephone No. +49 89 2399 7492



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP99/09571

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-16 as originally filed

Claims, No.:

1-11 as received on 08/01/2001 with letter of 04/01/2001

Drawings, sheets:

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☒ the claims, Nos.: 12

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP99/09571

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

II. Priority

1. ☐ This report has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:

☐ copy of the earlier application whose priority has been claimed.

☐ translation of the earlier application whose priority has been claimed.

2. ☒ This report has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid.

Thus for the purposes of this report, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims 1-9
	No:	Claims 10, 11
Inventive step (IS)	Yes:	Claims
	No:	Claims 1-11
Industrial applicability (IA)	Yes:	Claims 1-11
	No:	Claims

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP99/09571

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP99/09571

Re Item II

Priority

The present application was filed on 06.12.1999. The filing date of the priority document is 23.12.1998.

The priority of the present application was found invalid. The following features, disclosed in claims 1-11, are not disclosed in the priority document.

- the range 0.05 - 0.5 wt.% of solid matter derived from olive fruit
- at least 18 ppm of the olive phenolics is associated with the olive particles
- at least 180 ppm of olive phenolics
- a bitterness score of less than 3 and less than 5
- a phenolics content of at least 300 ppm
- the solids which settle at the bottom of the tanks in which the oil resulting from olives pressing is stored
- particles of the cake which remains after pressing the liquid phase from olives

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

- D1: WO 99 52377 A (UNILEVER PLC ;UNILEVER NV (NL)) 21 October 1999 (1999-10-21)
- D2: FR-A-2 337 509 (CHAZALET HENRI) 5 August 1977 (1977-08-05)
- D3: WO 97 32947 A (COMITER TRADING & SERVICES S R ;BALDI ALESSANDRO (IT); ROMANI ANNA) 12 September 1997 (1997-09-12)

1) Novelty - Art. 33(1) and (2) PCT

Since the priority of the present application was found invalid, D1 is considered to be state of the art.

The subject-matter of claims 10 and 11 (independent product claims) lacks novelty in view of D1.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP99/09571

This document discloses food products comprising a vegetable oil, having an increased concentration of phenolic compounds.

In addition, any food product, having a relative high concentration of phenolic compounds, anticipates the subject-matter of claims 10 and 11.

The subject-matter of claims 1 and 4 is considered to be novel since none of the available prior art cited in the international search report discloses the specific combination of features as claimed. Therefore, independent claims 1 and 4 meet the requirements of Article 33(2) PCT.

Claims 2 and 3 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty.

Claims 5-9 are dependent on claim 4 and as such also meet the requirements of the PCT with respect to novelty.

2) Inventive Step - Art. 33(1) and (3) PCT

The problem to be solved by the present invention is an alternative way to fortify food products with olive food ingredients, particularly with olive polyphenols.

The present invention provides a solution by incorporating 0.05 - 0.5 wt.% of solid matter derived from olive fruit, with a particle size of 0.1 μm - 5 mm, into food products.

D1 is being regarded as closest prior art.

This document (page 4, lines 19-27, claims 1-10) teaches the crushing of non-debittered olives to enhance the transport of polyphenols from the olive into the oil. D1 (page 4, lines 30 - page 5, line 8; claims 1 and 5) also discloses a method for the fortification of a vegetable oil by soaking crushed olive fruits in a vegetable oil and then removing these crushed olive fruits from the oil. This fortified oil is used for the preparation of spreads, salad dressings, mayonnaise and sauces. It is disclosed that treatments which cause the disintegration of the olive fruits, so that particles are formed, are excluded (page 4, lines 19-20).

However, the use of olive fruit particles in a concentration of 0.05 - 0.5 wt. % is not considered to involve an inventive step. The crushing of olives (as disclosed in D1) implies a disintegration of the olive fruit. The selection of particles with the features of claim 1 and 4 of the present application does not provide any

additional technical effects, in comparison with the vegetable oil comprising crushed olives and the method of producing a related food product, disclosed in D1.

Therefore, the subject-matter of product claims 1-3, method claims 4-9 and product-by-process claims 10 and 11 is not considered to involve an inventive step.

D3 teaches the skilled man that olive oil is the only plant oil which naturally contains appreciable amounts of polyphenol substances for consumption (page 2, lines 32-35). The positive effects of the intake of polyphenols in human nutrition are also disclosed (page 3, line 36 - page 4, line 4; page 4, line 16 - page 5, line 28). Products based on olive oil, enriched with polyphenols are also disclosed (claims 2 and 20).

D2 (page 2, lines 25-30) discloses olive based spreads comprising a mixture of crushed olive pulp, crushed olive epidermis and vegetable oil.

Re Item VII

Certain defects in the international application

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1-D3 is not mentioned in the description, nor are these documents identified therein.

Re Item VIII

Certain observations on the international application

1. Claims 2 and 3 do not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The feature "a bitterness score of less than 3" is not clear since this parameter does not enable the skilled person to determine the matter for which protection is sought. A composition comprising polyphenols cannot unambiguously be compared with standard solutions of oleuropein to assess "bitterness".

2. Claim 8 is incorrectly drafted as a claim dependent on claim 8 (Art. 6 PCT).

08. 01. 2001

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C L A I M S

1. Vegetable oil which contains at least 180 ppm of olive phenolics, characterized in that the oil comprises a dispersion of 0.05 - 0.5 wt.% of solid matter derived of olive fruit with a particle size of 0.1 μ m - 5 mm and in that at least 18 ppm of the olive phenolics is associated with said particles.
2. Vegetable oil according to claim 1, characterized in that the amount of olive derived solid matter is chosen such that a bitterness score of less than 3 results, where bitterness is assessed by comparison with standard oleuropein solutions using the graph of figure 1.
3. Vegetable oil according to claim 1, characterized in that the amount of olive derived solid matter is chosen such that a phenolics content of at least 300 ppm and a bitterness score of less than 5 results, where bitterness is assessed by comparison with standard oleuropein solutions using the graph of figure 1.
4. Method of fortifying a food product with phenolic compounds by incorporating in the food product solid matter derived from olives which have not been subjected to a debittering treatment, which solid matter has a particle size of 0.1 μ m - 5 mm, characterized in that the olives derived solid matter is added to the food product in an amount of 0.05 - 0.5 wt.%, preferably 0.1 - 0.3 wt.%.
5. Method according to claim 4, whereby the solid matter is chosen from the group consisting of 1. particles of unprocessed olives, 2. the solids which settle at the bottom of tanks in which the oil resulting from olives pressing is stored and 3. particles of the cake which remains after pressing the liquid phase from olives.
6. ^{Sub A} Method according to claims 4 or 5, whereby the obtained food product contains at least 10 ppm of olive derived phenolic

compounds.

7. Method according to any one of claims 4 - 6, whereby the food product is a vegetable oil, preferably an olive oil.
8. Method according to claim 8, whereby the olive solid matter is allowed to soak in the oil for at least one minute and then is separated from the oil.
9. Method according to any one of claims 4 - 6, whereby the food product is chosen from the group consisting of a spread, a salad dressing, mayonnaise or a sauce.
10. Food product obtainable by the method according to any one of claims 4 - 9.
11. Food product prepared with the oil obtainable by the method according to claims 7 or 8.